DOCUMENT RESUME

ED 190 548 SP 016 491

AUTHOR	Newman, John F.; Larsen, Arne
TITLE	A Decade of Dental Service Utilization 1964-1974.
INSTITUTION	Chase, Rosen and Wallace, Inc., Alexandria, Va.
SPONS AGENCY	Health Resources Administration (DHHS/PHS), Hyattsville, Md.
PUB DATE	80
CONTRACT	231-77-0057
NOTE	8p.; Small print may not reproduce clearly.
AVAILABLE FROM	National Technical Information Service, Order Department, 5285 Port Royal Road, Springfield, VA 22161 ($6.00).
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Dental Health; *Facility Utilization Research; *Health Services; Trend Analysis

ABSTRACT

A summary is presented of a national survey on the subject of dental health. The survey, which covers a ten year period from 1964 to 1974, obtained information on the following: 1) personal and demographic characteristics of respondents; 2) dental behavior; 3) perception of need; 4) knowledge, habits, and attitudes toward dental treatment; 5) financing and expenditures for dental treatment; and 6) utilization of available dental treatment. (JD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED190548

Executive Summary

A DECADE OF DENTAL SERVICE UTILIZATION

1964 - 1974

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service - Health Resources Administration

SP016 491

DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
HEALTH RESOURCES ADMINISTRATION
HYATTSVILLE, MARYLAND 20782

Bureau of Health Professions

July 1980

Dear Recipient:

You will find enclosed a copy of an executive summary entitled "A Decade of Dental Service Utilization: 1964-1974." A limited production of a 40 page typeset publication bearing the same title is expected to occur in the near future. However, it is not possible to precisely estimate when the publication will be available for mailing. The publication has been authored by John F. Newman Ph.D. and Arne Larsen of Blue Cross and Blue Shield Associations, Chicago Illinois and prepared by Chase, Rosen and Wallace, Inc. of Alexandria Virginia for the Division of Dentistry, Bureau of Health Professions, Health Resources Administration under Contract No. (HRA) 231-77-0057.

The Division of Dentistry expects to be the sole source of supply for the printed publication (i.e., the Government Printing Office (GPO) is not expected to stock the publication for public sale). A copy of the GPO publication or extra copies of the executive summary may be obtained from:

Executive Secretariat-Publications
Room 3-22, Center Building
3700 East-West Highway
Hyattsville, Maryland 20782.

For persons wishing to receive copies of the publication either before or after printing by GPO, such copies will be available by request from the National Technical Information Service (NTIS). NTIS may be reached by phone (703)557-4650 or by mail:

NTIS
Order Department
5285 Port Royal Road
Springfield, Virginia 22161.

Requestors should be prepared to give the publication's title and accession number (HRP-0902266). Payment can be made by personal credit card. Delivery is by forth class mail unless requested otherwise. If delivered by forth class mail and paid by credit card, the estimated cost to the requestor will be about $6.00.

Sincerely,

Clifford C. Scharke

Clifford C. Scharke, D.M.D., M.P.H.
Project Officer
Professional Practices Development Branch
Division of Dentistry

Enclosure

EXECUTIVE SUMMARY

This is an executive summary of the publication entitled "A Decade of Dental Service Utilization: 1964-1974". It is intended to provide an overview of the publication in order to enable persons interested in dental services utilization to determine whether the entire publication will be of interest to them. This summary does not provide detailed tabulation of results or a detailed explanation of the research effort that produced them. This publication has been authored by John F. Newman, Ph.D. and Mr. Arne Larsen of Blue Cross and Blue Shield Associations, Chicago, Illinois, and prepared by Chase, Rosen & Wallace, Inc. of Alexandria, Virginia, for the Division of Dentistry, Bureau of Health Professions, Health Resources Administration, under Contract (HRA) 231-77-0057.

Background

In 1974, the Division of Dentistry of the Health Resources Administration, U.S. Department of Health, Education and Welfare, sponsored a national survey of households in the United States as a part of a continuing Division program in the general area of dental health services research. This survey was conducted in the months of September and October 1974. The collected data were then converted into a series of data bases, some of which were used to provide the quantitative basis for the work described in this study. The interview instrument and resultant data included information on (1) personal and demographic characteristics, (2) dental behavior, (3) perception of need, (4) knowledge, habits and attitudes toward dental treatment, (5) financing and expenditures for dental treatment, and (6) utilization of dental treatment. The population covered by the sample was the civilian, noninstitutionalized population of the continental United States. The reference period varied somewhat by question but was generally the previous 12 month period.

Purpose

The major purposes of this study are: (1) to report the utilization of dental services in 1974, (2) to compare 1964 and 1974 utilization data, (3) to explore the effects of dental prepayment in 1974, and (4) to provide insight pertaining to future expansion in prepaid dental services. Thus, in addition to the analysis of the 1974 data, an attempt is made to identify and explain changes that have occurred since a similar survey was conducted in 1964 1/. The growth of prepaid dental plans and the inclusion of questions related to dental prepayment (insurance) plans in the 1974 survey make it possible to discuss the influence of such plans on the utilization of dental services.

1/ Newman, J.R. and Anderson, O.W., Patterns of Dental Service Utilization in the United States: A Nationwide Social Survey. Chicago, University of Chicago, Center Health Administration Studies, 1972.

Approach

This study of dental service utilization involves two separate analytical approaches. The first approach, trend analysis, involves the replication of selected tables from the 1964 study using 1974 data. The second approach is the tabular analysis of 1974 data for which comparison with 1964 data is not possible. More specifically, these latter data are concerned with: (1) description of dental prepayment coverage, (2) utilization of dental services for both covered and uncovered populations, and (3) analysis of perceived oral health status in relation to utilization of dental services.

For both strategies, measures of dental service utilization include mean numbers of visits and proportion of the population with a visit per year. These measures are reported in the context of predisposing, enabling and need variables consistent with accepted socio-medical theory of access to health services 2/.

For the purposes of this study, predisposing variables are classified into demographic and social structure characteristics. Enabling variables are those which describe the individual's ability to obtain care. These variables are classified as family resources and community resources. Need variables are measured in terms of the self-assessment of oral health and self-perceived need for dental services. The specific variables used in the analyses are:

PREDISPOSING	ENABLING	NEED
Demographics	Family Resources	Self-perceptions
- Age - Sex - Race - Family size	- Family income - Ability to pay - Prepaid dental coverage	- Perceived condition of teeth - Perceived need for dental services
Social Structure	Community Resources	
- Occupation of household head household head	- Region - Community type Education of	

Findings

The relative importance of these groups of variables is ranked low, medium or high on the basis of how much variation in the utilization of dental services each group is considered to explain. The data appear to indicate that family resource variables are the most important variables affecting utilization. Demographic, social structure and self-perception variables are ranked of medium importance. The relative importance of the community resource variables is considered to be low, although it is noted that a key community resource variable, the dentist-population ratio, was not included in the 1974 data. Thus, in terms of the major groupings described previously, these results can be summarized as follows:

2/ Aday, L.A. and Andersen, R.M., Development of Indices of Access to Medical Care. Ann Arbor, Health Administration Press, 1975.

VARIABLE GROUPS	RELATIVE IMPORTANCE
Predisposing	
Demographics	Medium
Social structure	Medium
Enabling	
Family resources	High
Community resources	Low
Need	
Self-perceptions	Medium

Trend Analysis

In addition to the overall measures of utilization, the study also examines utilization of dental services by service categories as follows: cleaning and fluoride treatments, examinations and X-rays, fillings and inlays, extractions, dentures, and other services. As is true for the mean number of visits for all services, there are differences in the use of specific types of services associated with various predisposing and enabling variables. Differences in the proportion of persons receiving services between 1964 and 1974 are larger for preventive services than for other dental services. Age, race, education, occupation, family income, and ability to pay all appear to be substantially related to the use of preventive services, while sex, family size, region, and community type appear to be less strongly related to the use of preventive services.

In summary, the 10 year study period between 1964 and 1974 is associated with a 10 percent increase in the proportion of the population which encountered one or more dental visits in the previous year, one-tenth of a visit increase in the number visits per user of dental services, and no remarkable changes in the aggregate associations between consumption of services and income, education or occupation. However, there does appear to be a general trend toward an increase in the proportion of persons with one or more visits for cleaning, examination, and services other than fillings, extractions, and dentures. In addition, the proportion of persons with one or more denture visits has declined. These shifts in the distribution of dental services vary by region of the country and for specific categories of services. In general, the West tends to exceed the average shift within each service group and the South tends to fall short of the average shift within each service group. Rural farm and rural non-farm communities appear to be most closely associated with the increase in the proportion of persons with one or more visits for cleaning whereas small urban and rural farm communities appear to be most closely associated with shifts to more examinations.

Tabular Analysis

The effect of prepaid dental coverage is examined for both predisposing and enabling variables by type of service. Large differences in utilization, between those with coverage and those without, are present for the demographic variables. In particular, the largest differences were found for those 65 years of age and over and for nonwhites. Coverage is also related to the receipt of specific services and its effect is stronger for preventive services than for restorative services. More specifically, it has been found that the proportion of persons covered by prepayment who have used dental services in the 12 month period immediately prior to the 1974 data collection period is uniformly greater at all educational levels but is negligible at the highest income levels. Mean visits for covered persons are uniformly greater at all educational levels but are disproportionately greater for low income groups.

Overall, prepayment appears to result in an increased prevalence of one or more visits for cleaning, examination, and services other than fillings, extractions, and dentures. However, it seems that these effects are greater in the low income and the well educated groups. Overall, the self-assessment of dental health solicited after the annual reference period of the 1974 study is unassociated with mean visits per user, whereas the presence or absence of prepayment is positively correlated with mean visits per user. However, for those of high education and income a self-assessment of "excellent" dental health reveals that covered persons incur more visits than those without coverage.

In addition, the fact that those users who are covered and claim no further need for dental services have incurred more visits than those who are not covered raises the question of whether the difference represents discretionary, extra, or unnecessary treatment. Thus, it appears from the data, as reported, that income is a greater barrier than education in utilization, frequency of visits, and predilection toward preventive and rehabilitative services but that higher education is a greater incentive, when in the presence of prepayment, in maximizing the acquisition of such dental treatment. In general, the benefits of dental prepayment tend to be captured by both the indigent and the well educated.

Recommendations

As a result of the significant costs to be borne in the event of widespread coverage of dental services for the population, it remains important to improve our understanding of the relative benefits, including health, which can be expected to occur from dental prepayment as well as feasible alternatives or supplements suitable for public policy or private initiatives. Therefore, subsequent research should provide for policy analysis which is designed to determine the relative cost effectiveness of income transfers, education, attitudinal or behavioral change, or otherwise, and for whom, so that the costs and benefits of policy alternatives can be studied as they might apply to the population as a whole or specialized subgroups within the population. Toward this end the authors discuss the need for further research in such areas as:

1. the relationship between utilization of dental services and:

   - dental knowledge, attitudes and beliefs
   - clinical evaluation of dental need
   - prepaid dental coverage and its interaction with other variables.

2. the development of theoretical (behavioral) models which will permit study of cause and effect relationships which influence the utilization of dental services.

Thus, the full publication should be regarded as both a compendium of specific findings and a statement of the need for further research.